ABSTRACT OF THE DISCLOSURE

[0030] A method and system is provided for more accurately determining ink in-flow and out-flow to a reservoir in a solid-to-liquid ink phasing delivery system for supplying ink to a printer. The printer throughput is safely maximized with a software algorithm that measures the ink available in the printer reservoir for printing. The algorithm is based on the known amount of ink in the reservoir when a level sensor probe is tripped and then calculates additional changes in ink volume. The process is done until the algorithm determines the reservoir volume is below a predetermined minimum level when the level sense probe senses ink. The algorithm calculates the ink leaving the reservoir using an out-flow model based on pixel counting and calculates ink entering the reservoir using an in-flow model based on a minimum guaranteed amount of ink delivered from the melt heater. A time out period is further calculated in which the reservoir should be refilled, and if not, the system is checked for an ink stick jam.